

"U" IS FIGURED
TO STEEL COLUMN

REVISED
WORLD TRADE CENTER

Revised: June 23, 1966

EXTERIOR WALL, SPANDRELS AND EXTERIOR COLUMN INSULATIONS

THERMAL CONDUCTIVITY AND HEAT TRANSMISSION COEFFICIENTS

Value Based on Wall & Column Design Shown on SK M-A-72 (June 23, 1966)

Fireproofing Material	Conductivity (k) BTU HR-SF- ^R PER-IN.		"U" - Coefficient Transmission - BTU/HR-SF- ^{deg} F				
			At Sides of Column		At Outside Face of Column (W/Air Space)		
			With 1 5/8" F.P.	With 3/8" Polyurethane Included	With 1 5/8" F.P.	With 3/8" Polyurethane Included	With 2" F.P. and 3/8" Polyurethane
1. Sprayed Mineral Fiber (Spraycraft)	.26	3.85	.135 .151	.116 .129	.136	.104	.092
2. Sprayed (Cementitious) Vermiculite (Monokote)	.75	1.335	.302 .429	.221	.302	.182	.152
3. Laminated Gypsum Board (U. S. G. Fire Code)	1.11	.9	.345 .595	.267	.385	.209	.195
4. Concrete (L.W. 100 PCF)	3.57	.128	.63 1.62	.353	.625	.264	.256
5. Vonco	.38	2.63	.151 .225	.151	.185	.131	.127
6. Cafco	.27	3.7	.14 .162	.119	.140	.106	.094
Notes:							
1. Fireproofing for inside face of column is assumed to be 1 3/8" gypsum plaster having conductivity of 1.56 and the over all transmission coeff. of .396 between the room and column steel.							
2. Inside still air film resistance is taken as .68							
3. Outside air film resistance is taken as .17							
4. Air space resistance is taken as .97							
5. Conductivity of polyurethane is taken as .17							
NC:rt,dd							



WTCL-440-P

$$R (\text{estimated}) = 2.2''$$

1. Spraycraft.

.17 air film
.97 air space
6.25 17% FP.

$$\frac{7.39}{1} = R \quad u = \frac{1}{R} = .135$$

Res. .97 air space

6.42

2.2

8.62

$$u = \frac{1}{8.62} = .116$$

2. 1.14

2.17

3.31

.97

2.34

2.2

4.54

$$u = .302$$

3.31

2.2

15

6.01

$$u = .221$$

3. 1.14

1.46

2.60

$$u = .385$$

192-49

4. 1.14

.455

1.595

.97

.625

2.2

2.825

$$u = .63$$

$$u = .353$$

5. 1.14

4.27

5.41

$$u = .185$$

5.41

2.2

7.61

8.596

1.14

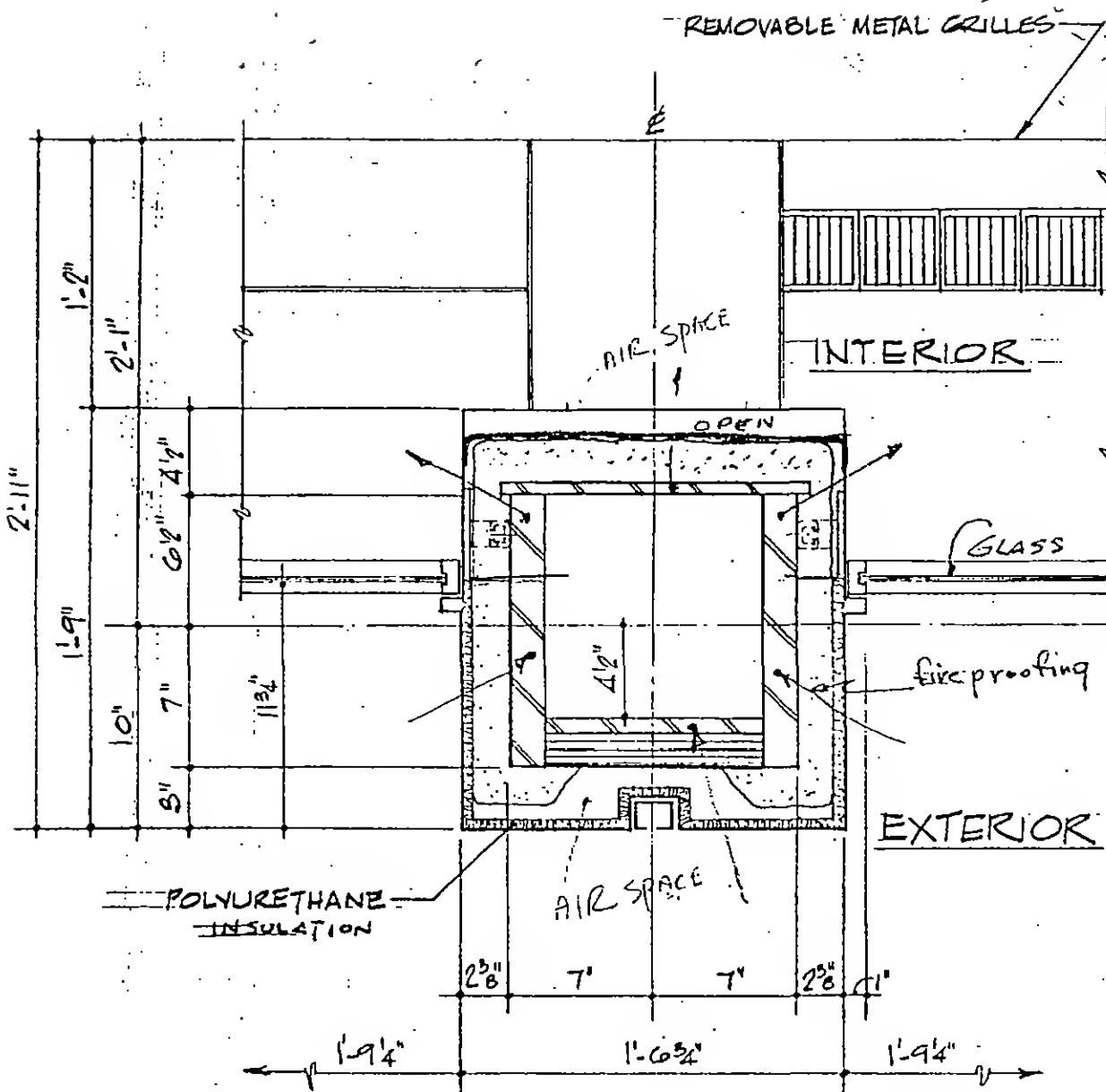
6.17

7.31

$$u = .14$$

4.35

1.39



EXTERIOR WALL COLUMN

TOWERS A & B

SCALE: 1/2" = 1'-0"
 DRAWN BY S.R.
 APPROVED

THE PORT OF NEW YORK AUTHORITY
 THE WORLD TRADE CENTER

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